

REMARKS

Claims 1-19 are pending in this application; and in the Office Action, the Examiner rejected all of these claims over the prior art, principally U.S. Patents 5,980,054 (Logsdon, et al.) and 6,125,279 (Hyziak, et al.). More specifically, Claims 1-3, 6-11, 13 and 16-19 were rejected under 35 U.S.C. 103 as being unpatentable over Logsdon, et al. in view of Hyziak, et al; and Claims 4 and 5 were rejected under 35 U.S.C. 103 as being unpatentable over Logsdon, et al. in view of Hyziak, et al and U.S. Patent 4,977,569 (Johnson, et al.). Claim 12 was rejected as being unpatentable over Logsdon, et al. in view of Hyziak, et al. and U.S. Patent 6,390,365 (Karasawa); Claim 14 was rejected as being unpatentable over Logsdon, et al. in view of Hyziak, et al. and U.S. Patent 5,396,429 (Hanchett); and Claim 15 was rejected under 35 U.S.C. 102 as being fully anticipated by Logsdon, et al.

Applicants herein ask that independent Claims 1, 8, 15 and 16 be amended to better define the subject matters of these claims.

For the reasons advanced below, Claims 1-19 patentably distinguish over the prior art and are allowable. The Examiner is thus asked to enter this Amendment, to reconsider and to withdraw the rejection of Claims 1-19 under 35 U.S.C. 102 and 103, and to allow these claims.

As explained in detail in the present application, this invention, generally, relates to a virtual cooperative network formed by mobile objects. One important objective of the invention is to provide a virtual network that enables cellular or mobile devices to transmit and receive signals from a source even though the devices themselves are not able to receive the signals directly from the source. This may be accomplished, for example, by using one or more other cellular or mobile devices to relay the signal from the source to the ultimate

recipient. Thus, when one mobile device is in a defined location where that device does not receive the signal directly from the source, another mobile object or device, which is outside that defined location, is used to relay the signal from the source to the former mobile object or device.

In a preferred implementation of the invention, the potential relaying object checks the signal that it receives from the source to determine whether the signal was received inside or outside the defined location, and to determine if the signal is marked for further transmission. If the signal is so marked, the signal may then be relayed.

Logsdon, et al describes a communication network or system in which one device may be used to register a second device with a system backbone in case the latter device cannot communicate directly with that system backbone. Logsdon, et al. is directed primarily to an emergency mobile routing protocol, and, more particularly, to registering devices with the system backbone under emergency situations.

Hyziak discloses a procedure in which mobile units that are within a base coverage area of a base site are used to relay transmitted data packets from the base site to a mobile receiver that is outside the base coverage area. This, in effect, extends the coverage area of the base site.

There are a number of important features of the present invention that are not shown or suggested by the prior art. For instance, with the present invention, the relaying, or potential relaying, mobile device checks to determine whether it received the signal inside or outside the defined location where the ultimate recipient device is located. This check is useful because, where the relaying, or potentially relaying, device is may affect, or determine, when, how and whether this particular device actually relays the signal.

Independent Claims 1, 8, 15 and 16 describe the above-discussed feature of this invention. In particular, Claims 1 and 11 both set forth the step of the second mobile object checking whether the signal was received outside or inside the defined location, and determining whether the signal is marked for further transmission. Claim 8, which is directed to a network for transmitting cellular/radio signal, and Claim 15, which is directed to a virtual network for transmitting cellular/radio signal, describe analogous apparatus features.

The other references of record have been reviewed, and it is believed that these other references, whether considered individually or in combination, are no more pertinent than Logsdon, et al. or Hyziak.

For instance, Johnson, et al. was applied only against Claims 4 and 5, and this reference was cited for its disclosure of giving priority to emergency signals. This reference, though, does not teach or suggest the principal of using a mobile object that is relaying signals from a source to another mobile object, also to check the signal to determine if it was received inside or outside the above-discussed defined location.

Hanchett was cited for its disclosure of a procedure for monitoring traffic conditions. Hanchett does not address the problem of mobile communication devices moving out of range of a source signal, and thus does not suggest any solution for that problem.

In view of the above-discussed differences between Claims 1, 8, 15 and 16 and the prior art, and because of the advantages associated with those differences, these claims patentably distinguish over the prior art and are allowable. Claims 2-7 are dependent from Claim 1 and are allowable therewith. Also, Claims 9-14 are dependent from, and are allowable with, Claim 8; and Claims 17-19 are dependent from Claim 16 and are allowable therewith. The Examiner is, accordingly, requested to reconsider and to withdraw the

rejections of Claims 1-14 and 16-19 under 35 U.S.C. 103 and the rejection of Claim 15 under 35 U.S.C. 102, and to allow Claims 1-19.

The amendments being made herein only further describe features already set forth in the claims. More specifically, the changes being requested elaborate on the role of the relaying, or potentially relaying, mobile device. In addition, the last Office Action was the first time that the Examiner applied Hyziak against the claims, and it is respectfully submitted that Applicants should be given an opportunity to respond to the use of this reference to reject the claims. It is thus believed that entry of this Amendment is appropriate, and such entry is respectfully requested.

Every effort has been made to place this application in condition for allowance, a notice of which is requested. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

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